



Public Meetings Scheduled for EPA's Proposed Groundwater Cleanup

The Cleanup Proposal...

After careful study of the Hows Corner Superfund Site, EPA is proposing to:

- ! Install a groundwater extraction and treatment system to contain source area groundwater within the 2-acre fenced area of the Site.**
- ! Monitor non-source area ground water to track changes in contaminant concentrations and ensure the plume is not expanding.**
- ! Establish controls to prevent exposure to contaminated groundwater.**
- ! Provide public water in the event that sampling of residential wells shows unacceptable risk from contamination.**
- ! Evaluate the cleanup approach to confirm that it is protective of human health and the environment.**

How would the cleanup affect the Plymouth community?

You are invited to attend an informational public meeting on July 10th, 2002 to learn about the proposed cleanup plan and how it compares with other cleanup options for the site. At the meeting, EPA will respond to your questions and concerns about the proposed cleanup and how it may affect you. For further information

about this meeting, call EPA Community Involvement Coordinator Pam Harting-Barrat (617) 918-1318, or toll-free at 1-888-372-7341 ext. 81318.

What do you think?

EPA is accepting public comment on this cleanup proposal from July 12th through August 12th. You do not have to be a technical expert to comment. If you have a concern or preference regarding EPA's proposed cleanup plan, then EPA wants to hear from you before making a final decision on how to protect your community. To provide formal comments, you may:

Offer oral comments during the comment portion of the public information session on August 6, 2002.

Send written comments postmarked no later than August 12th to:

William Lovely, RPM
U.S. EPA Region I
1 Congress Street
Suite 1100 (HBT)
Boston, MA 02114-2023

E-mail comments by
August 12th to:

lovely.william@epa.gov

First Meeting

**Public Information Meeting
to learn more about this
proposed plan**

**July 10th, 2002
7:00p.m.**

Grange Hall
1927 Moosehead Trail
Plymouth, ME

Second Meeting

**Formal Comment Session to
give citizens the opportunity
to enter official comments for
public record about this
proposed plan**

**August 6th, 2002
at 7:00 p.m.
Grange Hall**

Site History

The Hows Corner Superfund Site is a former waste oil storage and transfer facility located in Plymouth, Maine.

- , George West owned/operated a waste oil storage and transfer facility on a 2-acre area of the Site from 1965 to 1980.
- , Contamination discovered in October 1987 after a residential well was sampled as part of a potential property transfer. Subsequently, MEDEP tested nearby wells and provided bottled water and filters to those residents whose private wells were contaminated by past site activities.
- , MEDEP completed a preliminary investigation in March 1990. Organic chemicals (VOCs, SVOCs, and PCBs,) were found in both soils and groundwater underlying the Site.
- , In July 1990, MEDEP requested the assistance of EPA including the installation of a permanent safe drinking water supply.
- , EPA fenced the 2-acre source area of the site in November 1990; 847 tons of contaminated soils within this area were removed in June 1991.
- , EPA commenced construction of a permanent water supply in May 1993 to provide potable water to properties with contaminated drinking water supplies.
- , EPA finalizes site placement on the National Priorities List (NPL) in September 1995.

Scope and Role of this Action

EPA plans to implement the cleanup of this Site in two phases. The Site is defined as the entire 17-acre parcel of land owned by George West and the surrounding area where groundwater contamination has come to be located. The proposed cleanup plan described in this document is intended to be the first phase of the long-term groundwater cleanup action at the Hows Corner Superfund Site.

First phase of groundwater cleanup action- Long-Term Site Cleanup, or Remedial Action for Non-Source Area Groundwater (Operable Unit I) - The first phase of cleanup activity, or Operable Unit I, targets non-source area groundwater which is defined as groundwater underlying the 17-acre George West property and surrounding area (i.e., the Site) where volatile organic compounds (VOCs) are detected in concentrations below 10 parts per million (ppm).

Second phase of groundwater cleanup action- Long-Term Site Cleanup, or Remedial Action for Source Area Groundwater (Operable Unit II) - will be described in a future proposed plan. The second phase of the cleanup activity, or Operable Unit II, will target source area groundwater which is defined as groundwater underlying the 2-acre fenced area of the Site where VOCs are detected in concentrations at or above 10 parts per million (ppm). Because of the potential that dense non aqueous phase liquids (DNAPLs) may be located in this part of the groundwater plume, the ability to restore this groundwater to state and federal standards is uncertain at this time. A further evaluation of the technical practicability of the restoration potential of source area groundwater will be performed during this second phase of the cleanup activity.

Remedial Investigation Program

A remedial investigation (RI) involves the collection of data to determine the nature and extent of contamination at a Site. The RI was performed from 1999 - 2001 at the Hows Corner Site. Investigations

for the following major areas were completed as part of the RI:

- , groundwater underlying the 17-acre George West property and surrounding areas where the contamination has come to be located;
- , contaminated soils within the 2-acre fenced area that were not removed as part of the 1990-91 removal action; and
- , soils, wetlands, surface water bodies (e.g., ponds, streams), groundwater, and sediments in all potentially impacted areas outside of the 2-acre fenced area.

EPA Community Update #7, released in April 2002, also provides a brief summary of the entire RI program.

Remedial Investigation Summary:

Groundwater represents the major source of drinking water in the area and also discharges to Plymouth Pond and other nearby surface water bodies. Contamination was found in both the groundwater and surface water at the Site. To identify the magnitude and extent of contamination within these media, the following activities were completed:

- , identification of the physical makeup of bedrock in the vicinity of the Site;
- , installation of 24 bedrock monitoring wells;
- , sampling of these wells for contaminants;
- , sampling of existing and former water supply wells;
- , sampling of surface water and sediments of nearby ponds, streams, and wetlands;
- , evaluation of the fracture orientation (direction) in bedrock through geophysical surveys and bedrock mapping;
- , packer testing of the bedrock wells to identify fracture zones; and
- , computer modeling of groundwater and contaminant movement throughout the bedrock aquifer.

The RI also included soil sampling to determine whether or not the soils remaining within the 2-acre fenced area of the Site posed a concern.

The results of these investigations reveal the following:

- T** Surface water flows from the 2-acre fenced area north towards Plymouth Pond and to the south towards Martins Stream, which eventually discharges towards Plymouth Pond.
- T** Groundwater flows predominantly within the bedrock and is controlled by the nature, frequency and distribution of fractures naturally occurring within the bedrock.
- T** VOCs, primarily PCE (perchloroethylene), in groundwater and PCBs (polycarbonated biphenyls) in soil were identified as the significant remaining contaminants related to past waste oil facility operations.
- T** The contaminated groundwater plume has reached its maximum extent. Field data and groundwater modeling show that groundwater flows away from the 2-acre fenced area in all directions and discharges to the surface in many small spring fed ponds and to the surface on the flanks of the hill around the 2-acre fenced area.
- T** Groundwater flow becomes restricted at increased depths and to the west of the Site as the rock becomes less weathered.
- T** A remnant DNAPL source is believed to be entrapped within the fractures of the bedrock aquifer where the concentration of PCE is in excess of 10 ppm.
- T** Plymouth Pond is not being unacceptably impacted by contamination from the Site. However, it is likely that low levels of contamination are migrating from the groundwater to the wetlands of Plymouth Pond.

T Contaminated groundwater underlies a number of properties surrounding the 17-acre George West property.

T No one is currently being exposed to contaminated groundwater; however continued use of the groundwater as a drinking water source could result in people being exposed to unsafe levels of contaminants at some time in the future.

T Any well installed within the groundwater plume limits has the potential to be impacted by site related contaminants (e.g., PCE, TCE, and PCBs). In addition, new wells could cause the existing groundwater plume to expand beyond its current boundary.

T Surface water and sediments in nearby ponds, streams, and wetlands are not being unacceptably impacted by site related contaminants.

Figures 1 and 2 show the conceptual migration pathway for the contamination as well as a side view of the groundwater contamination. Figure 1 also shows the general areas of both source area and non-source area groundwater.

How did the contamination get to its present location?

The groundwater has become contaminated by spills to the ground during the handling of waste oils within the 2-acre fenced area of the Site as well as by other unacceptable operating practices. The contamination migrated from the soil into the bedrock aquifer. Thereafter, the contamination moved according to groundwater flow paths which can be greatly influenced by the orientation of the fractures in the bedrock and the proximity of pumping wells in the vicinity of the contamination. For the Hows Corner Site, the pumping of residential wells has drawn the contamination along the direction of the bedrock

fractures by private water supply wells which resulted in the contamination of those locations that are now served by the water line.

The 1991 removal action addressed most of the contaminated soil above the bedrock. However, due to the high levels of contaminants within the bedrock below the 2-acre fenced area, PCE and other contaminants will remain in the groundwater until this secondary source of groundwater contamination is either removed or isolated from the bedrock aquifer.

Why is this cleanup needed?

EPA used the results of the remedial investigation program to complete a Human Health Risk Assessment Report and Ecological Risk Assessment Report. These reports evaluate the potential adverse effects from long-term exposure to the contamination detected at the Site.

Based upon the Human Health and Ecological Risk Assessment Reports, EPA has identified the need for cleanup actions for groundwater and soils beyond the 1990-91 and 1995 removal actions (i.e., soil disposal, water line installation).

The primary reasons for the proposed Operable Unit I, (Phase 1) cleanup action are:

- C** Groundwater is contaminated at levels that would threaten human health if the groundwater were to be used as a source of drinking water.
- C** The potential presence of DNAPLs within source area groundwater will continue to act as a source of groundwater contamination.
- C** Changes in current groundwater use patterns could result in the further migration of groundwater contaminants.
- C** The contaminated groundwater is discharging into the surrounding wetlands and surface water bodies and will continue to pose a threat to surface water if not controlled.

What about the remaining contaminated soils?

Based on the results of the Human Health and Ecological Risk Assessments, remedial alternatives were considered for contaminated soil within the 2-acre fenced area of the Site where concentrations of lead and PCBs were above levels considered to be protective. However, because these soils were removed from the Site in 2001 during a groundwater cleanup pilot study, soils remaining in the 2-acre fenced area no longer pose an unacceptable risk. Details of this pilot study can be found in the Feasibility Study (FS).

Remedial Action Objectives:

Based upon the results of the Remedial Investigation and the Human Health Risk Assessment and Ecological Risk Assessment, EPA identified the following remedial action objectives to serve as the basis for cleanup option development:

- C Prevent the use of groundwater containing contaminants that exceed federal or state maximum contaminant levels (MCLs), non-zero maximum contaminant level goals (MCLGs), maximum exposure guidelines (MEGs), or in their absence, an excess cancer risk of 1×10^{-6} or a hazard quotient of 1 (see **Proposed Cleanup Levels - Table 1**);
- C Contain source area groundwater within the 2-acre fenced area of the Site.
- C Restore groundwater outside of the 2-acre fenced area of the Site (i.e., non-source area groundwater) to meet federal or state maximum contaminant levels (MCLs), non-zero maximum contaminant level goals (MCLGs), maximum exposure guidelines (MEGs), or in their absence, an excess cancer risk of 1×10^{-6} or a hazard quotient of 1 (see **Proposed Cleanup Levels - Table 1**); and

- C Perform long-term monitoring of surface water, sediments, and groundwater to verify that the cleanup actions at the Site are protective of human health and the environment.

Proposed Cleanup Levels

Based on the information that is currently available, the estimated time to reduce contaminant concentrations to the levels proposed in Table 1 is uncertain and varies considerably (over 1000 years) depending on the assumptions used in the groundwater model developed for this Site. EPA expects to develop a more precise estimate of cleanup times by reducing the uncertainty of these variables through additional site characterization during Phase II of the cleanup.

Because of the uncertainty that this proposed cleanup plan can meet MCLs, non-zero MCLGs, or MEGS and associated requirements in a reasonable time frame, EPA is proposing to waive these Applicable or Relevant and Appropriate Requirements (ARARs) in the interim until additional information is developed regarding cleanup times. Assuming additional information supports this cleanup plan meeting ARARs in a reasonable period of time, then the cleanup levels identified below are proposed for non-source area groundwater and the ARARs that were waived in this interim action will be met when the final cleanup is completed. If this proposed cleanup plan is unable to meet ARARs within a reasonable period of time, then the issue of waiving these ARARs in the long term will be addressed in the final cleanup plan for the Site.

Because this proposed cleanup plan waives ARARs in the interim, EPA specifically seeks comments from the public regarding this ARAR waiver. In addition, this proposed cleanup plan could potentially impact wetlands by dewatering them. There is no practical alternative to contain contaminated source area groundwater. EPA will minimize impacts as required. However, because this proposed cleanup plan could potentially impact wetlands, EPA

specifically seeks comments from the public regarding these impacts.

Table 1: Proposed Groundwater Cleanup Levels

<i>Site contaminants of concern in groundwater</i>	<i>Cleanup level (parts per billion)</i>	<i>Basis</i>
<i>Tetrachloroethene</i>	<i>3</i>	<i>1992 MEG (1)</i>
<i>Trichloroethene</i>	<i>5</i>	<i>MCL (2)</i>
<i>1,1 - Dichloroethene</i>	<i>7</i>	<i>MCL</i>
<i>cis-1,2 Dichloroethene</i>	<i>70</i>	<i>MCL</i>
<i>1,1,1 - Trichloroethene</i>	<i>200</i>	<i>MCL</i>
<i>1,2,4- Trichlorobenzene</i>	<i>70</i>	<i>MCL</i>
<i>PCBs (Arochlor 1260)</i>	<i>0.05</i>	<i>1992 MEG</i>
<i>Dieldren</i>	<i>0.02</i>	<i>1992 MEG</i>
<i>Arsenic</i>	<i>10</i>	<i>MCL</i>
<i>Manganese</i>	<i>200</i>	<i>1992 MEG</i>

(1) State Maximum Exposure Guidelines for drinking water

(2) Federal Maximum Contaminant Levels for drinking water

Cleanup Alternatives for the Hows Corner Superfund Site

The Hows Corner Feasibility Study Report for Operable Unit I, (non-source area groundwater) evaluated all of the cleanup options that EPA considered in addressing groundwater contamination at the Site, including EPA's proposed cleanup plan. The options, referred to as "cleanup alternatives," are different combinations of plans to either restrict access to the Site, or contain, move, or treat the

contamination to protect public health and the environment.

Because additional information needs to be gathered for the source area groundwater, the FS does not include cleanup alternatives for this part of the groundwater plume. Further characterization and an evaluation of clean-up technologies that could potentially destroy contamination within part of the groundwater plume would be necessary before EPA could make a finding regarding the restoration potential of source area groundwater. Because neither of these activities have been completed, a cleanup proposal for source area groundwater is not included in this Proposed Plan.

During the upcoming 30-day public comment period, EPA welcomes your comments on this proposed cleanup plan as well as the other technical approaches EPA evaluated. These alternatives are summarized below. Please consult the Hows Corner Site Feasibility Study, available at the Plymouth Town Office, for more detailed information.

Groundwater Cleanup Alternatives

Limited or no action

Alternative 1(GW-1): No Further Action

This alternative would not include any additional work. There would be no further cleanup actions for groundwater. EPA would leave the Site as it is, and no efforts would be made to control the migration of the contaminants in groundwater or to restore the groundwater.

Capital Costs: none

Present Worth of Long Term Monitoring: none

Alternative 2 (GW-2): *Limited Action*

This alternative would involve three major components:

- C Implement land use restrictions to prevent use of the groundwater (see **Figure 3**);
- C Monitor residential wells with a public water contingency.
- C Perform long-term monitoring of surface water, groundwater, and sediments.

No efforts would be made to control the migration of groundwater or reduce the existing contaminant concentrations in groundwater to the levels proposed in Table 1. As a result, the high concentrations of contaminants within source area groundwater would continue to act as a source of groundwater contamination throughout the Site. The FS estimates a time period of 225-4,634 years before groundwater cleanup levels are achieved in the aquifer.

Long-term monitoring would be performed to detect any change in concentrations of contaminants in the groundwater and local water supply wells. Five year reviews would be performed to assess the Site conditions and determine if the cleanup approach is protective of public health and the environment. Institutional controls would target those properties where the groundwater plume has currently migrated or could be expected to migrate at some time in the future. While the institutional controls are being developed, public water would be provided to those properties where sampling of the existing private well indicates that people are being exposed to contaminants that pose an unacceptable risk.

Capital Costs: \$1,511,000

Present Worth of Long Term Monitoring:
\$2,114,000

Total Present Worth of Alternative:
\$3,625,000

Alternatives that Treat contaminants onsite

Alternative 3: *Hydraulic Containment*

This alternative would actively control the migration of contaminated groundwater and allow for the possible restoration of the majority of the groundwater plume by containing source area groundwater through a groundwater extraction and treatment system.

The major components of this alternative include:

- C Installation of a long-term groundwater extraction and treatment system to prevent further migration of the existing groundwater plume and potentially restore non-source area groundwater to the cleanup levels proposed in Table 1;
- C Implement land use restrictions to prevent use of the groundwater (see Figure 3);
- C Monitor residential wells with a public water contingency.
- C Perform long-term monitoring of surface water, groundwater, and sediments.

Bedrock extraction wells would be used to extract and contain source area groundwater. The objectives of the pumping system would be to contain contaminants within source area groundwater thereby allowing the possible restoration of non-source area groundwater through natural processes.

Five year reviews would be performed to assess the Site conditions and determine if the cleanup approach is protective of public health and the environment.

Capital Costs: \$3,447,000

Present Worth of maintenance, monitoring, periodic reviews: \$4,688,000

Total Present Worth of Alternative: \$8,135,000

Do the Alternatives Meet the Nine Criteria?

Alternative GW-1, no further action, would be the least protective of the three alternatives; it would offer no protection to human health and the environment. Risks from exposure to contaminated groundwater would remain. Chemical concentrations in groundwater would remain in excess of MCLs and MEGs, and high levels of contamination within source area groundwater would act as a continuing source of contamination to groundwater throughout the Site until it is degraded through natural attenuation. Under this alternative, there would be no restrictions on groundwater use.

Alternative GW-2, limited action, would provide greater overall protection than GW-1 because this alternative would employ institutional controls to restrict the use of groundwater. While these institutional controls are being developed, the environmental monitoring with the public water contingency would ensure that people who continue to use their private wells are not exposed to groundwater contaminants that pose an unacceptable risk. The implementation of institutional controls will require administrative coordination between governmental agencies and the affected property owners to ensure their effective implementation and enforcement.

Alternative GW-3 would provide greater overall protection of human health and the environment than either GW-1 or GW-2. GW-3 would eliminate further contamination to groundwater outside the 2-acre fenced area of the Site through hydraulic containment of source area groundwater thereby allowing the restoration of non-source area groundwater in a significantly shorter time than under current conditions. Similar to GW-1 and GW-2, Alternative GW-3 does not include active remediation of non-source area groundwater. However, unlike GW-1 and GW-2, the restoration of non-source area groundwater can be accomplished through natural attenuation because further contaminant migration from source area groundwater will be prevented. Institutional controls would provide

The Nine Criteria for Choosing a Cleanup

EPA uses nine criteria to balance the pros and cons of cleanup alternatives. EPA has already evaluated, in its Feasibility Study for Operable Unit I, how well each of the cleanup alternatives developed for the West/ Hows Corner Superfund Site meet these criteria. Once comments from the state and the community are received, EPA will select a final cleanup plan for the Site.

- (1) **Overall protection of human health and the environment:** Will it protect you and the plant and animal life on and near the site? EPA will not choose a plan that does not meet this basic criterion.
- (2) **Compliance with Applicable or Relevant and Appropriate Requirements (ARARs):** Does the alternative meet all federal and state environmental statutes, regulations and requirements on-site?
- (3) **Long-term effectiveness and permanence:** Will the effects of the cleanup plan last or could contamination cause future risk?
- (4) **Reduction of toxicity, mobility or volume through treatment:** Does the alternative reduce the harmful effects of the contaminants, the spread of contaminants, and the amount of contaminated material?
- (5) **Short-term effectiveness:** How soon will site risks be adequately reduced? Could the cleanup cause short-term hazards to workers, residents or the environment?
- (6) **Implementability:** Is the alternative technically and administratively feasible? Are the right goods and services (i.e. treatment machinery; space at an approved disposal facility) available for the plan?
- (7) **Cost:** What is the total cost of an alternative over time? EPA must find a plan that gives necessary protection for a reasonable cost.
- (8 & 9) **EPA also strongly considers state and community input prior to finalizing the selection of the cleanup alternative.**

comparable protectiveness to GW-2's through prohibiting the use of groundwater until the contaminants are reduced to acceptable levels.

In the short term, none of the groundwater response alternatives meet the chemical specific ARARS. In the long term, GW-3 is the only alternative that has the potential to comply with chemical specific ARARS in a reasonable period of time. However, due to the uncertainty associated with the cleanup times for non-source area groundwater, EPA cannot make a finding of compliance with ARARS at this time. EPA proposes waiving these requirements until additional information is developed regarding cleanup times.

Alternative GW-1 would provide the least long-term effectiveness because no actions would be taken to manage contaminant migration in groundwater or restrict the use of untreated contaminated groundwater. Alternative GW-2 would be more effective than GW-1 in the long term because institutional controls would be implemented to prevent use of contaminated groundwater. Effectiveness in the long term would depend upon effective enforcement. Alternative GW-3 is the most effective in the long term and also has the potential for the greatest permanence of the three alternatives as it would prevent contain source area groundwater thereby allowing for the potential restoration of non-source area groundwater. The long-term effectiveness of the institutional controls would be comparable to those of GW-2. Residual risks are comparable to GW-1 and GW-2, until the groundwater concentrations diminish to MCLs and MEGs.

No reduction is achieved in toxicity, mobility or volume through treatment under Alternative GW-1 or GW-2 because contaminated groundwater would not be treated. Alternative GW-3 provides some reduction in toxicity, mobility, and volume of contaminants through the extraction and treatment of contaminated groundwater. However, the magnitude of this reduction is somewhat limited given that the primary goal of the treatment system is hydraulic containment, not restoration, of source area groundwater.

Because no active remedial measures would be implemented under Alternatives GW-1 or GW-2, no additional short-term impacts would be anticipated from these two alternatives. Implementation of Alternative GW-3 would not result in significant short-term impacts to the local community or to on-site remedial workers.

Alternatives GW-1 and GW-2 are readily implementable because active remediation is not required. Alternative GW-3, which requires construction of a hydraulic containment system, is also implementable. The aquifer investigations, construction of the extraction wells, injection wells, and treatment system rely on standardized materials and techniques. For all alternatives, additional response actions can be readily implemented if conditions warrant them.

GW-1, No Further Action, requires no cost. GW-2, Limited Action is more expensive than GW-1, while GW-3, Hydraulic Containment, is the most expensive of them all.

A Closer Look at EPA's Proposal...

EPA is proposing to prevent exposure to contaminated groundwater and potentially restore non-source area groundwater to drinking water standards at the Hows Corner Superfund Site (the “Site”). EPA would accomplish this cleanup task by containing source area groundwater through extraction wells. A treatment system would then remove the contamination from the water and re-inject the clean water into the aquifer outside of the containment zone. EPA would rely on natural processes to reduce the concentration of contamination in non-source area groundwater to current state and federal drinking water standards. During this time, land use restrictions (referred to as institutional controls) to prevent the use of both source and non-source area groundwater would be imposed until the aquifer is restored to safe levels at some point in the future. Residential wells that are in use prior to the implementation of institutional controls will be sampled with a contingency that would require public water be provided should sampling indicate that people are being exposed to contaminants that pose an unacceptable risk.

For this phase of the groundwater cleanup program, EPA proposes to:

1. Before the installation of the final extraction system, EPA plans to:

- C Perform engineering studies to determine the exact number and location of groundwater extraction and reinjection wells;
- C Collect additional information to develop a more precise estimate of cleanup times for non-source area groundwater.

2. Install a groundwater extraction and treatment system to contain source area groundwater, and facilitate the restoration of non-source area groundwater.

3. Operate and maintain the groundwater extraction and treatment system:

- C Operate and maintain a groundwater extraction and treatment system to limit the migration of the contaminated groundwater and limit the discharge of contaminated groundwater to the nearby surface water bodies.

4. Implement long-term monitoring program for surface water, groundwater, and sediments:

- C Implement a long-term monitoring program to track the cleanup of non-source area groundwater. As part of this program, monitor groundwater, surface water and sediments to ensure that contaminants are contained within the source area.
- C Sample residential wells within the Site that are currently in use. Public water will be provided to residents should sampling indicate an unacceptable risk.

5. Establish institutional controls:

- C Work with the affected property owners, local officials, and the MEDEP to develop land use restrictions that will prevent the use and migration of contaminated groundwater.
- C The institutional controls may include restrictions on specific properties, Town requirements, or both.
- C A preliminary map of those properties for which groundwater restrictions may be sought is presented in Figure 3.

6. Five-year Reviews:

- C EPA would review the cleanup program every five years to determine if the cleanup is protective of human health and the environment.

7. Cost:

Capital costs: \$3.4 million

Operation and Maintenance costs: \$2.5 million

Long-term Monitoring costs: \$2.0 million

Comparison of Groundwater Cleanup Alternatives

Nine Criteria	1 No Further Action	2 Limited Action	3 • Hydraulic Containment using Groundwater extraction and treatment
<i>Protects human health and environment</i>	–	◦	U
<i>Meets federal and State requirements</i>	–	–	◦
<i>Provides long-term protection</i>	–	–	U
<i>Reduces mobility, toxicity and volume</i>	–	–	U
<i>Provides short-term protection</i>	–	U	U
<i>Implementable (Can it be done?)</i>	U	U	U
<i>Capital Cost: (Net Present Value):</i>	\$ 0	\$1.5million \$3.6 million (30 years)	\$3.4 million \$7.9 million (30 years)
<i>Time to reach cleanup goal</i>	225- 4,653 years	225-4,653 years	35 - 1,434 years
<i>State agency acceptance</i>	To be determined after the public comment period		
<i>Community acceptance</i>	To be determined after the public comment period		

- EPA's preferred alternative
- U Meets or exceeds criterion
- Partially meets criterion
- Does NOT meet criterion

Why Does EPA Recommend Alternative GW-3 (Hydraulic Containment) described in this Proposed Plan?

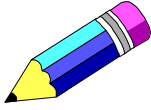
EPA recommends this cleanup plan as the best balance of public health and environmental protection with cost, effectiveness, and implementability. The cleanup plan described in this Proposed Plan would focus on containing source area groundwater to prevent further degradation of non-source area groundwater. To accomplish this objective, EPA would install and operate a groundwater extraction and treatment system to contain highly contaminated groundwater within the 2-acre fenced area of the Site thereby allowing the cleanup of non-source area groundwater through natural processes (i.e. dilution, adsorption, volatilization). Long-term environmental monitoring would track the natural attenuation of groundwater contaminants in non-source area groundwater while residential well monitoring and institutional controls would prevent exposure to contaminated groundwater. In summary EPA recommends this proposed cleanup plan because, if implemented, the cleanup option would :

- ! Protect public health and the environment.***
- ! Potentially result in a cleanup of the non-source area groundwater.***
- ! Prevent the migration of contaminants from source area groundwater.***

Long-term monitoring of surface water, groundwater, and sediments would also be performed until cleanup levels are attained.

Next Steps

In September 2002, EPA expects to have reviewed all comments and signed a record of Decision (ROD) describing the chosen cleanup plan. The ROD and a summary of responses to public comments will then be made available to the public at the Plymouth Town Office and through EPA Records Center in Boston. EPA will announce the decision to the community through the local news media and a general mailing.



How You Can Comment On EPA's Cleanup Proposal ?

During the 30-day public comment period from July 12th to August 12th, EPA will accept formal written comments and hold a public hearing on August 6th. EPA uses this public input to improve the cleanup proposal. Your formal input and ideas will become part of the official public record. The transcript of comments and EPA's written responses will be issued in a document called a **Responsiveness Summary** when EPA releases the final cleanup decision. Once complete, the Responsiveness Summary will be available at the Plymouth Town Office for review.

There are three different ways in which individuals can express their comments on this Proposed Plan

1. Comments can be submitted in writing to EPA.
2. Comments can be sent to the EPA Remedial Project Manager (RPM) by email at: lovely.william@epa.gov.
3. Comments can be spoken into the official public record during the public hearing that will occur during the comment period.

EPA encourages anyone with a concern or who favors the cleanup to express their opinion during the comment period. All comments are welcome. Any of the three mechanisms above are acceptable for providing comments and all of the comments are given equal weight.

Two types of public meetings will occur with respect to the Proposed Plan. The first will be an informational meeting to explain the proposed cleanup and answer any questions that may arise. Comments that are made during this meeting will not be part of the "official record". This meeting will focus on a discussion of the Proposed Plan and RI/FS and is considered informational only.

The second type of meeting, a public hearing, will occur during the official comment period. At this meeting, EPA will provide a brief summary of the

cleanup proposal and then the floor will be open for spoken comments. A stenographer will be present to record all of the comments offered during this comment session. Comments made must be limited in duration in order to allow all individuals present to have an opportunity to speak their comments into the record. EPA does not respond to any of the comments made at the meeting other than to indicate the time limits or request clarification. At the close of the comments session, if time permits, EPA will be available to answer questions.

The comment period will last for thirty days unless an extension is requested. EPA will typically allow a 30 day extension if an extension is requested. Once the comment period is complete, EPA will assemble and evaluate all of the comments submitted. Appropriate revisions to the Proposed Plan will be made based on these comments. EPA will then sign the Record of Decision (ROD) describing the chosen cleanup plan. The ROD and a summary of responses to public comments will be made available to the public at the Plymouth Town Offices and through EPA Records Center in Boston.

For More Information about the Cleanup

All of the technical and public information publications prepared to date for the site are available for public review at the following locations:

EPA Records Center
1 Congress Street,
Suite 1100
Boston, MA 02114-2023
(617) 918-1453
Hours: 10:00 a.m.-noon, 2:00 p.m.-5:00 p.m.

Plymouth Town Office
Plymouth, ME
(207) 257-4646

UNITED STATES
ENVIRONMENTAL PROTECTION AGENCY
REGION I

1 Congress Street, Suite 1100
Boston, MA 02114-2023

Forwarding address correction requested

Hows Corner Superfund Site

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Use This Space to Write Your Comments

or to be added to the mailing list

EPA encourages you to provide your written comments and ideas about the cleanup options under consideration for dealing with the contamination at the West/How's Corner Superfund Site. You can use the form below to send written comments. If you have questions about how to comment, please call ***EPA Community Involvement Coordinator Pam Harting-Barret at 617.918.1318***. Please mail this form or additional sheets of written comments, postmarked no later than August 14th 2002, to:

William Lovely
Remedial Project Manager
U.S. Environmental Protection Agency
Region I, (HBT)
1 Congress Street, Suite 1100
Boston, MA 02114 - 2023
or E-Mail to : lovely.william@epa.gov

(Attach sheets as needed)

Comment Submitted by:

Mailing list additions, deletions or changes

If you did not receive this through the mail and would like to

" be added to the site mailing list

Name : _____

" note a change of address

Address: _____

" be deleted from the mailing list

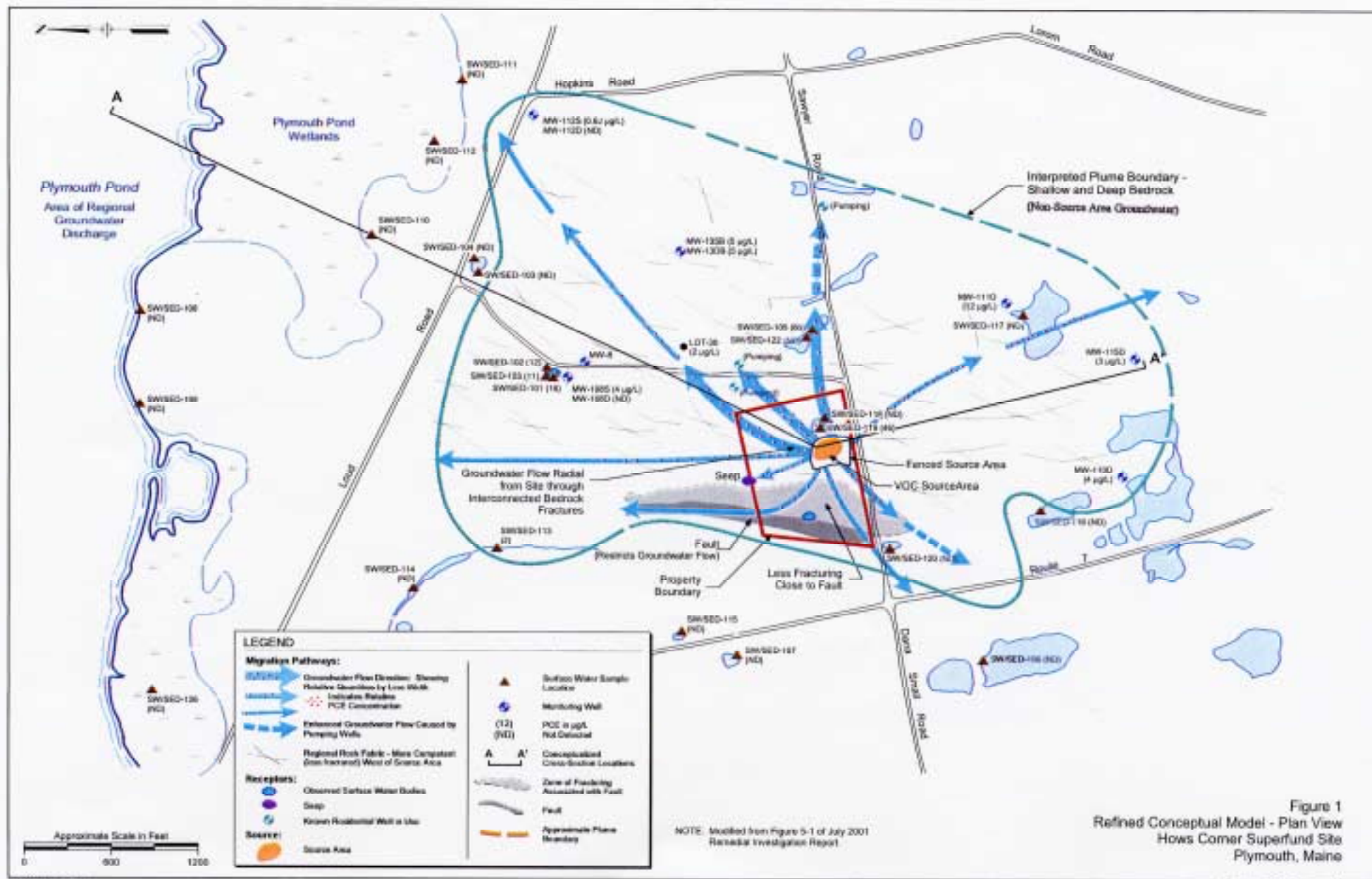
Please check the appropriate box and fill in the correct address information above.

**West/Hows Corner Superfund Site
Public Comment Sheet (cont....)**

Fold, staple, stamp, and mail-----

Place
Stamp
Here

William Lovely
Remedial Project Manager
U.S. Environmental Protection Agency
Region I (HBT)
1 Congress Street, Suite 1100
Boston, MA 02114 -2023



A'
South

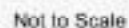


Figure 2
Conceptual Model - Vertical Profile
Hows Corner Superfund Site
Plymouth, Maine

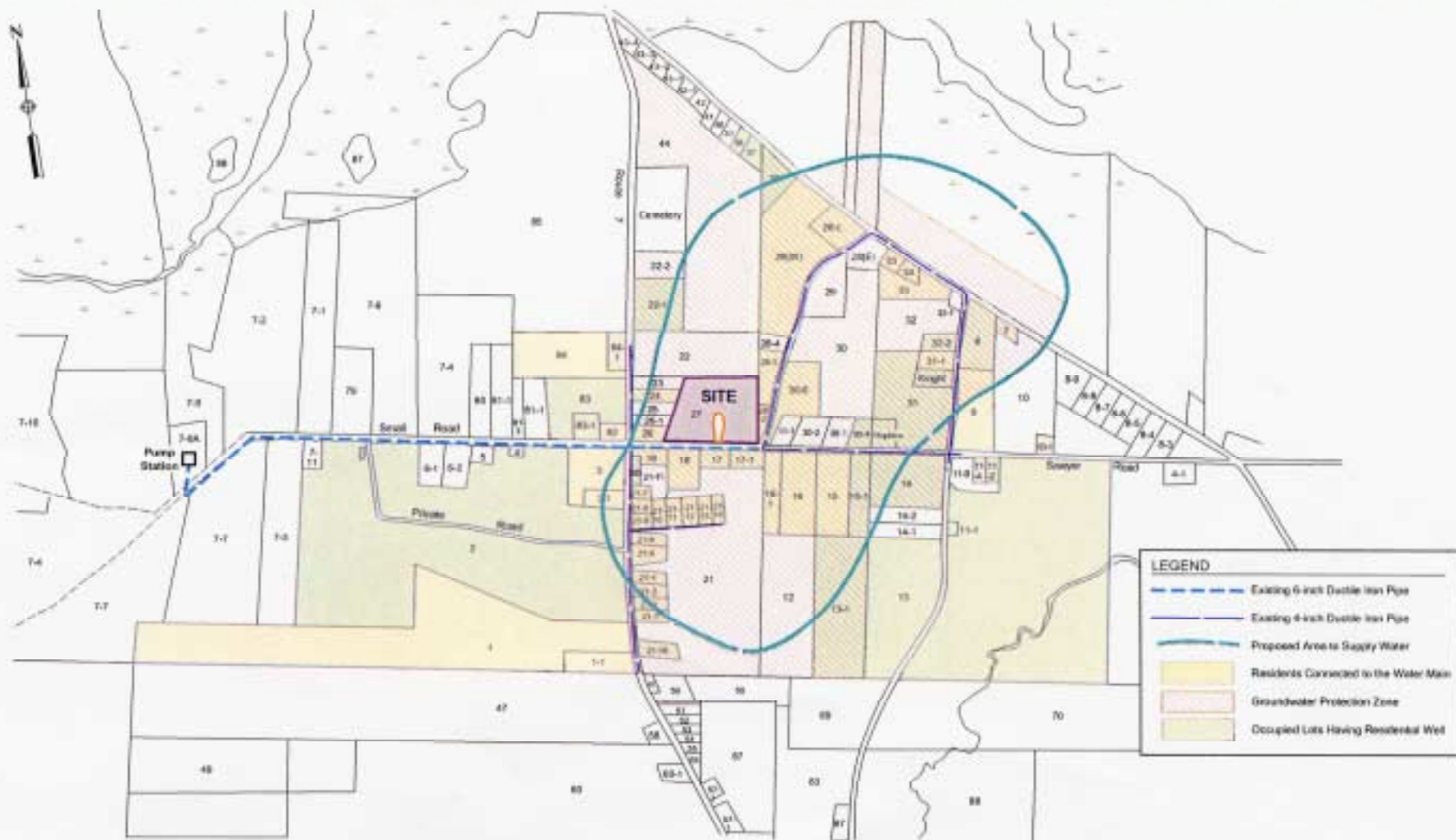


Figure 3
Proposed Institutional Control Zone
Hows Corner Superfund Site
Plymouth, Maine